

SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG 05I-4634-01 SAF-RC-001

Rad only ☒ Chem only Rad & Chem

☒ Complete Partial

300 Area 334A Bldg

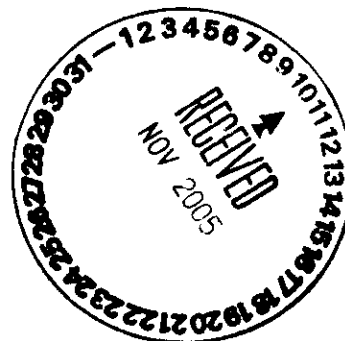
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Cover Page

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Report Identification Number: 05I-4634-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R300XX J451
Payroll#: 72520



Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
03 Nov 2005	J10N53	05I43679	NMAM 7300M	G05B8015	MCE
03 Nov 2005	J10N52	05I43680	NMAM 7300M	G05B8015	MCE
03 Nov 2005	J10N51	05I43681	NMAM 7300M	G05B8015	MCE

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Name: Joanna C. Sanchez
Title: Chemist
Date: November 10, 2005

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General Set Information: There are 9 samples in set 05I-4628-01, 12 samples in set 05I-4632-01, 6 samples in set 05I-4633-01, 3 samples in set 05I-4634-01, 11 samples in set 05I-4635-01, 3 samples in set 05I-4636-01, 12 samples in set 05I-4637-01 and 12 samples in set 05I-4638-01 for a total of 68 samples that were analyzed for beryllium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C (with a thermometer reading of 95°C) for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of $\pm 10\%$.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.01 ug/sample.

Method Blank Analysis: No beryllium was found in the media blank sample above the Contract Required Detection Limit (CRDL). No lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

Laboratory Control Sample and Duplicate Analysis: Four Laboratory Control Samples (LCSs) and four Laboratory Control Sample Duplicates (LCSDs) were prepared and analyzed with the sample batch.

The LCS results for beryllium were within the control limit of $\pm 20\%$. The Relative Percent Differences (RPD) between the LCS and the LCSD were within the control limit of 20%.

Replicate Analysis: Seven samples in this batch were replicated. The RPDs between the samples and the replicates were within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples ($\mu\text{g}/\text{sample}$) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ($\mu\text{g}/\text{L}$)

B = Concentration factor from sample preparation

= $\frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$

Sample

C = Dilution performed at time of analysis

Example Calculation: $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

Miscellaneous Comments: None.



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SAF#: RC-001 / R300XX J451
Payroll#: 72520

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium $\mu\text{g}/\text{sample}$		Beryllium $\mu\text{g}/\text{m}^3$		Air Volume L	
J10N53	05I43679	09 Nov 2005	<0.01	U	<0.081		123.	
J10N52	05I43680	09 Nov 2005	<0.01	U	**		0.00	
J10N51	05I43681	09 Nov 2005	<0.01	U	**		0.00	
Limit of Detection (LOD)			0.01					
Required Detection Limit (RDL)								

U - Parameter not detected above LOD.

J - Parameter between LOD and RDL.



QC Summary Page

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SAF: RC-001 / R300XX J451
Payroll#: 72520

Batch ID: G05B8015

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-238104-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
QC-238104-1	LCS	Beryllium	µg/sample	10.2	NA	10.0	102.	NA
QD-238104-1	LCSD	Beryllium	µg/sample	10.4	10.2	10.0	104.	1.38
BL-238104-2	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
QC-238104-2	LCS	Beryllium	µg/sample	10.3	NA	10.0	103.	NA
QD-238104-2	LCSD	Beryllium	µg/sample	10.6	10.3	10.0	106.	2.23
BL-238104-3	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
QC-238104-3	LCS	Beryllium	µg/sample	10.3	NA	10.0	103.	NA
QD-238104-3	LCSD	Beryllium	µg/sample	10.4	10.3	10.0	104.	1.33
BL-238104-4	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
QC-238104-4	LCS	Beryllium	µg/sample	10.5	NA	10.0	105.	NA
QD-238104-4	LCSD	Beryllium	µg/sample	10.5	10.5	10.0	105.	0.0832

MB - Method Blank
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LD - Laboratory Duplicate

NA - Not Applicable
ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) * 100.0
MS, MSD Percent Rec. = ((Result - Parent) / Target) * 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS - LCSD|) / ((LCS + LCSD)/2.0)) * 100.
MS, MSD Relative Percent Diff. = ((|MS - MSD|) / ((MS + MSD)/2.0)) * 100.
LD Relative Percent Diff. = ((|Parent - LD|) / ((Parent + LD)/2.0)) * 100

From: 509 37239883 Page: 12/23 Date: 11/8/2005 3:38:42 PM

WCH-5H-202 (08/29/2005)

From: 509 37239883 Page: 12/23 Date: 11/8/2005 3:38:42 PM

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: <u>C. Williams</u>		Company/Contact: <u>Debbie A. Pitts and Henry W. Raley</u>		Telephone No.: <u>531-1229</u>		Project Coordinator: <u>Joan H. Kessler</u>		Data Returned: <u>24 hrs</u>	
Payroll #: <u>72520</u>		Sampling Location: <u>300 area / 334 A</u>		SPECIAL INSTRUCTIONS: All relevant COAs must be provided: <u>Q300xx J4S1</u>					
Type of Sample: <u>Be personal</u>		Wipe Sample Media: Ghost <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		ANALYSIS METHOD (SPECIFIC): <u>NIOSH 7300</u>					
Shipped To: <u>Datachem</u>		Other: <u>BP</u>		Bill of Lading/Air Bill No.:					
POSSIBLE SAMPLE HAZARD/REMARKS: <u>SALT TOXICITY 127</u>		Special Handling and/or Storage: <u>N/A</u>							

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L or Area _____ cm ²)	PRESERVATION (i.e., cooling required, etc.)			No	No	No	No	No															
				MATRIX A - AIR W1 - WIFE X - OTHER	Preservation (i.e., cooling required, etc.)																					
SAMPLE ANALYSIS																										

Enter on line below the first Sample Number from Page One:

[illegible]

REVIEWED BY:

DATE:

PRINT/SIGN NAME

WCH-SH-202 (08/29/2005)